“SpeedChek”
04/28/2026

A Better Phonograph Speed Adjustment Tool

The KAB Speedstrobe, described elsewhere on merz-electric.com, has been the easiest way to accurately set phonograph turntable speed for over 30 years but newer available technology can now provide a better and inexpensive way to do so.

The Speedstrobe has several disadvantages:

1. The 10” disc covers all of a 10” or smaller record, except for 12” or larger diameter records, this does not allow setting speed while a record is playing.

2. Allows speed setting to only two places, that is 33 rather than 33.33, etc.

3. Only allows the setting of 14 of the most common speeds in use.

4. The disc must be removed before playing a record.

The Speedstrobe uses a fixed light source frequency and various numbers on the disc, the SpeedChek reverses this by utilizing a variable frequency light source and a fixed number of markings on the strobe disc, 60 or 120 marks work best. These marks may be easily created using an online website such as blocklayer.com

This disc may be made to the size of the smallest record label in use, allowing the strobe disc to remain in place while setting turntable speed or playing a record. A 3” diameter is about right.

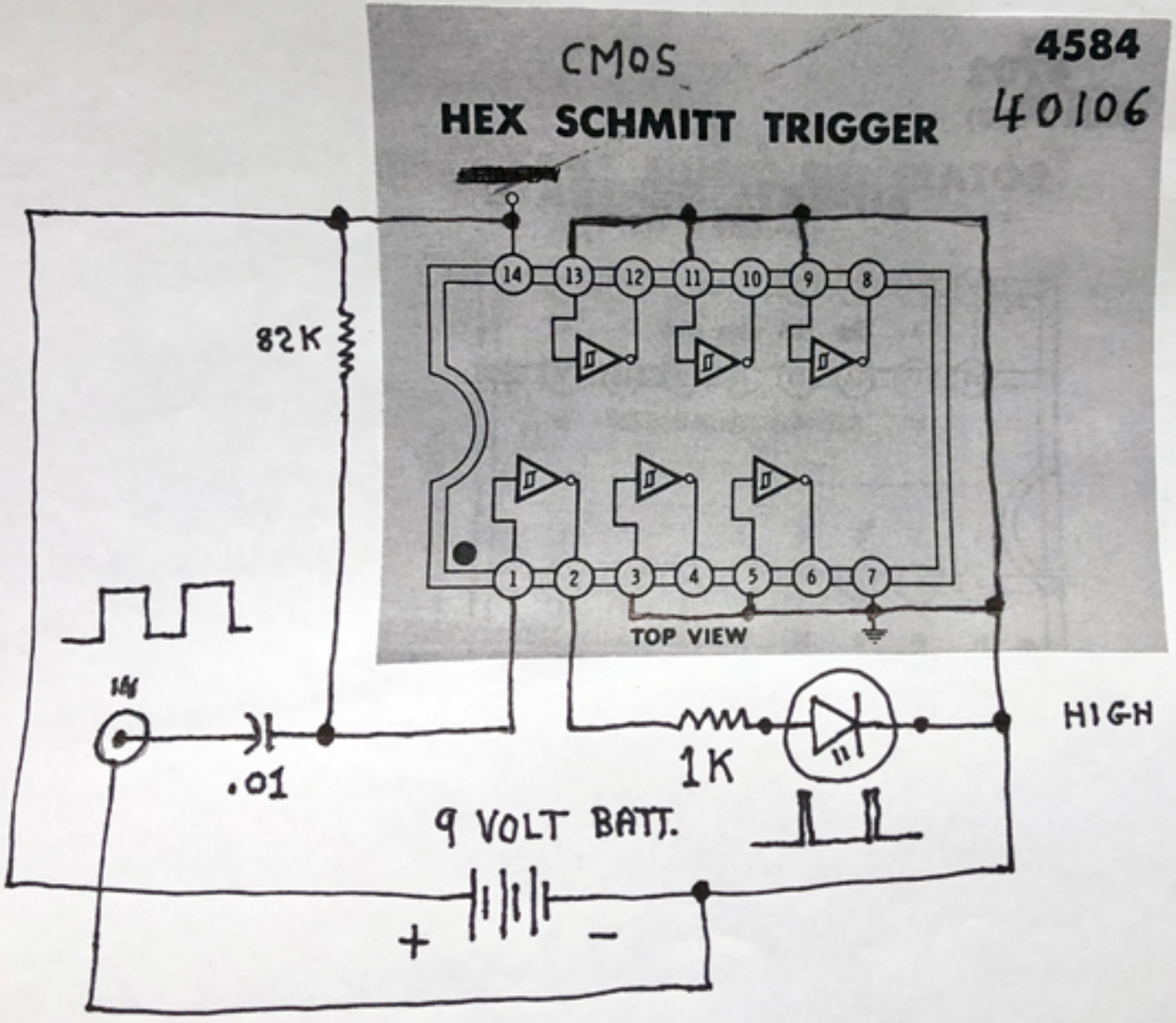
The light source is a Function Generator such as “the FG – 200 DDS Function Generator” available on eBay, Amazon, etc. for around $30 to $40. A high brightness LED may be connected directly to the output of the FG – 200. The FG – 200 operates from a DC source of 3 to 9 volts and may be used with rechargeable batteries and a solar cell to maintain the battery charge.

The FG – 200 allows for setting to 4 places: 16.66, 33.33, 78.26, etc. After use, the setting used is maintained. The unit may be used without any modification, so long as the waveform mode selected is either “ECG” or “Gaussian” This is because a narrow pulse is required to produce a distinct strobe image.

A sharper, cleaner image may be created by adding a simple cmos Schmitt trigger circuit operated from a 9 volt battery, since the current draw is extremely low (see photos for the suggested circuit) If this circuit is used, then the “Square Wave” mode is selected on the FG – 200.

This “SpeedChek” overcomes all the disadvantages of the “Speedstrobe” however, the FG – 200 lacks any presets, whatever speed is desired must be entered in but this is not a difficult step and whatever speed is set is permanently stored until changed.

There may be other inexpensive function generators that will work as well? One that I found several years ago worked but it did not store the set speed and it was difficult to set.



SHARP, NARROW PULSE FOR PHONO GRAPH "SPEEDCHEK" STROBE

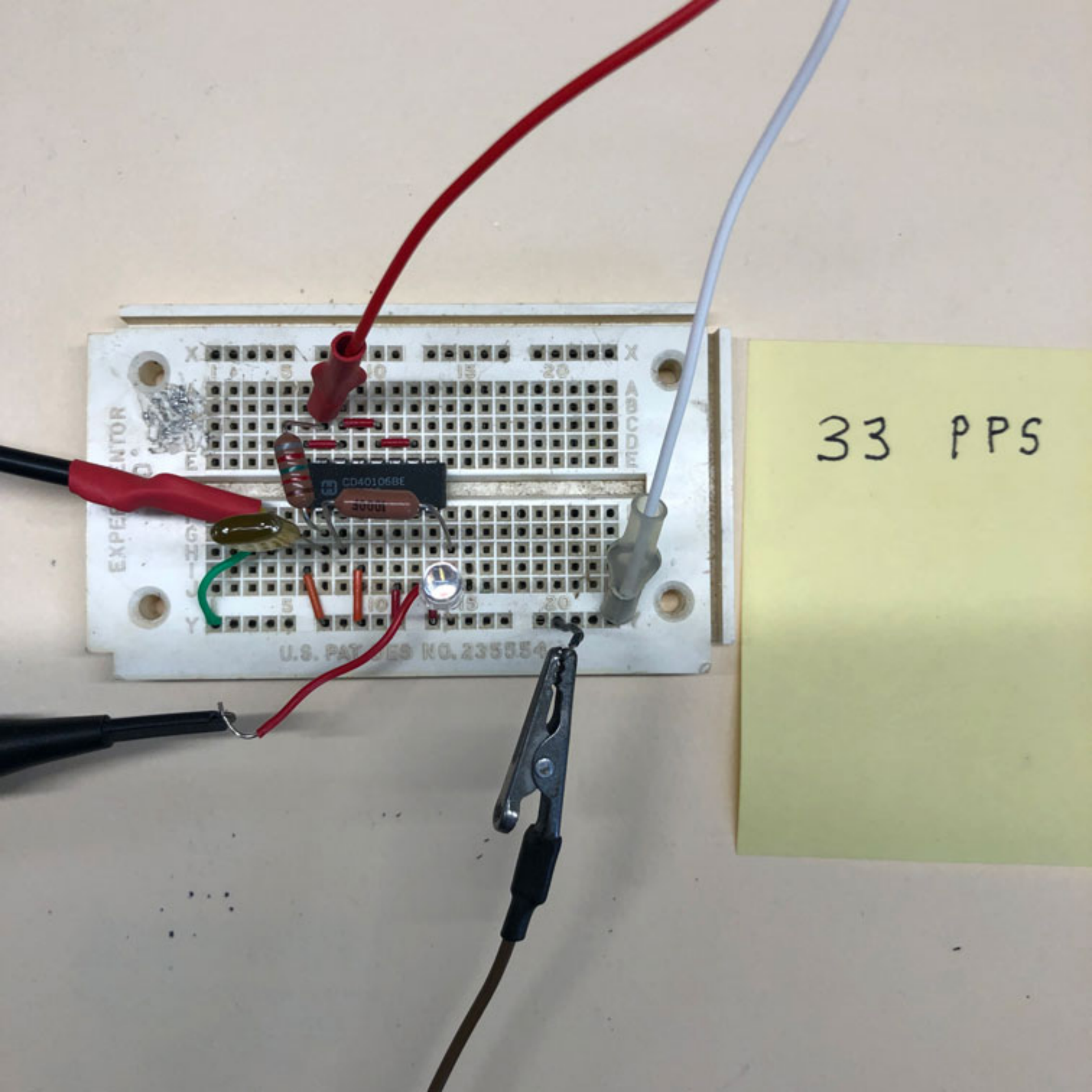
HIGH BRIGHTNESS LED

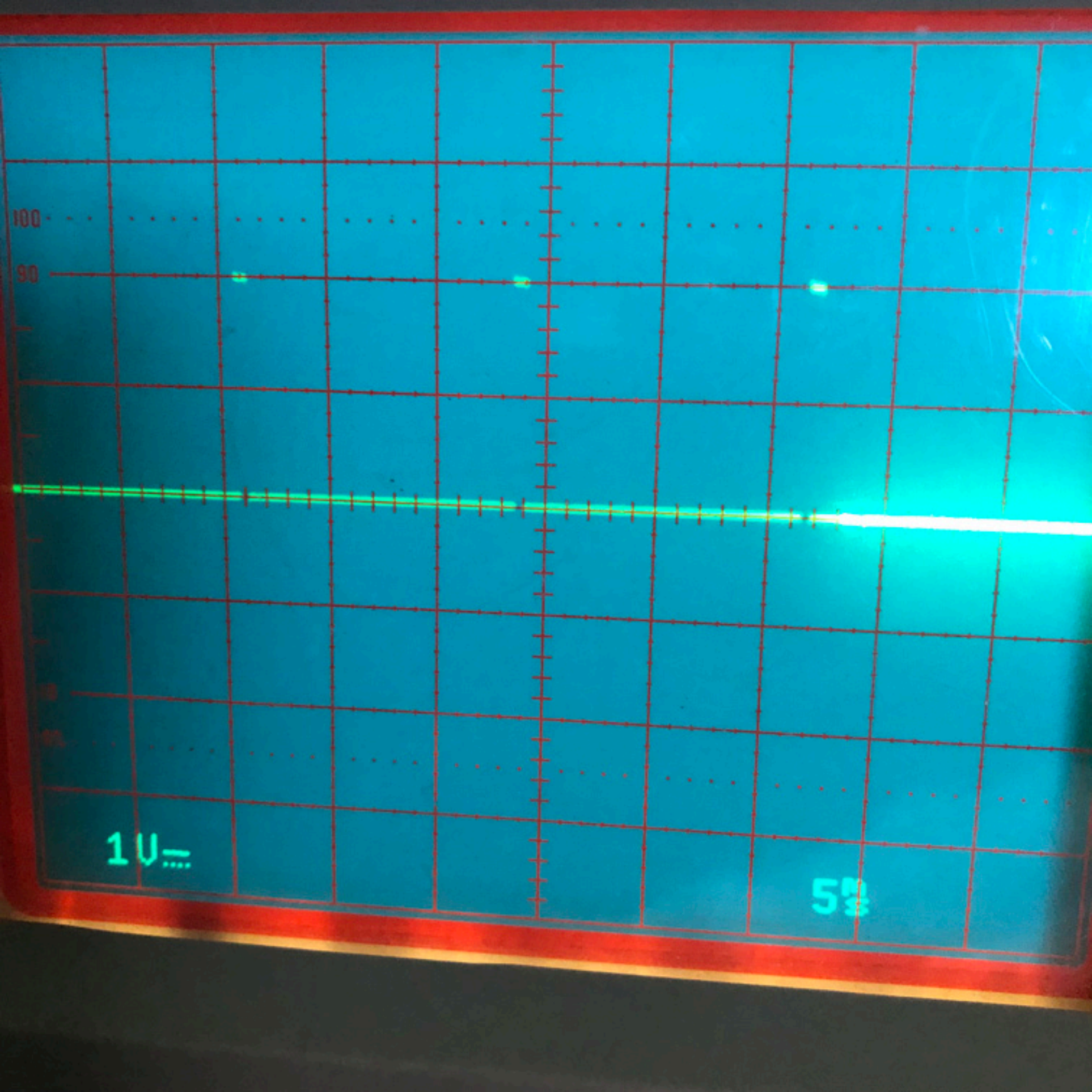
"SPEEDCHEK ✓"
C.D. MERZ
5-2-2026


SONY


FG-200 DDS FUNCTION GENERATOR
Wave: Square
Freq:000078.26Hz
RESOIUTION:0.01HZ
DC OFFSET
OFF
ON
POWER
MODE
CURSOR
+
−
RUN/STOP
FILTER
OFF
ON
Energizer
MAX


FG-200 DDS FUNCTION GENERATOR
Wave: Square
Freq:00078.26Hz
RESOIUTION:0.01HZ
DDS OUT
DC OFFSET
OFF
ON
0
DC 5V
POWER
MODE
CURSOR
+
−
RUN/STOP
FILTER
AMP
OFF
ON
OFF
ON


33 PPS
CD4010BE


100
90
1V
5